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ah			ase-directed plai	nt transformation for the	post-genomi	c era", Plant Mo	olecular Biology,
	48:183-200 (
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LIST OF INFORMATION DISCLOSED BY APPLICANT

16313,0052 SERIAL NO. FILING DATE 09/911,088 July 23, 2001

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			U.S. PATENT D	OCUMENTS				
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	6,175,058	1-16-01	Baszczynski et al		800	278		
U	6,187,994	2-13-01	Baszczynski et al	•	800	278		
	6,262,341	7-17-01	Baszczynski et al		800	278		
	5,190,871	3-2-93	Cox et al.		435	172.3		
	5,527,695	6-18-96	Hodges et al.		435	172.3		
	5,744,336	4-28-98	Hodges et al.		435	172.3		
	5,910,415	6-8-99	Hodges et al.		435	6		
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PCT/US00/19983	7-21-00	USA	Ow et al.	X
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OTHER D	TO HOUSE TO BUILD A	ORG (I I I	d mid D · D · D I	7. \

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

Albert et al., Site-specific integration of DNA into wild-type and mutant lox sites placed in the plant genome, 1995 Plant J., 7:649-59.

Alonso et al., The Bacillus subtilis Histone-like Protein Hbsu Is Required for DNA Resolution and DNA Inversion Mediated by the β Recombinase of Plasmid pSM19035, 1995 J. Biol. Chem., 270:2938-45. Araki, H. et al., Site-specific Recombinase, R, Encoded by Yeast Plasmid pSR1, 1992 J. Mol. Biol.,

Araki, K. et al., Targeted integration of DNA using mutant lox sites in embryonic stem cells, 1997 Nucleic Acids Res., 25:868-72.

Argos et al., The integrase family of site-specific recombinases: regional similarities and global diversity, 1986 The EMBO J., 5:433-40.

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'	170	- Linkston	12011 01 NTLN 1000/2900 2
01	1 6	Bannam et al., Mo	plecular genetics of the chloramphenicol-resistance transposon Tn4451 from Clostridium inpX site-specific recombinase excises a circular transposon molecule, 1995 Mol.
	\sim	perfringens: the T	npX site-specific recombinase excises a circular transposon molecule, 1995 Mol.
194		Microbiology, 16:	535-51.
1			, Reduced variation in transgene expression from a binary vector with selectable markers at
1 1		the right and left	I-DNA borders, 1994 Plant J., 6:957-68.
			er, Genomic targeting with purified Cre recombinase, 1993 Nucl. Acids Res., 21:2025-29.
<u> </u>			hange of gene activity in transgenic plants catalyzed by the Cre-lox site-specific
1	1		tem, 1992 Plant Mol. Biol., 18:353-61.
	l		Segmental genomic replacement by Cre-mediated recombination: genotoxic stress activation
1	1		ter in single-copy transformants, 1997 Nucleic Acids Res., 25: 2828-34.
	1		nabaena xisF gene encodes a developmentally regulated site-specific recombinase, 1994
İ	1		LOPMENT, 8:74-83.
	1		approach for the identification and cloning of genes: the pBACwich system using Cre/lox
1	1		abination, 2000 Nucl. Acids Res., 28:e19(i-vii).
-	1		fficient elimination of selectable marker genes from the plastid genome by the CRE-lox site-
1	1		ation system, 2001 The Plant J., 27:171-78.
<u> </u>	+		The Resolvase/Invertase Domain of the Site-Specific Recombinase TnpX Is Functional and
	1		get Sequence That Resembles the Junction of the Circular Form of the Clostridium
	ł		poson Tn4451, 1997 J. of Bacteriology, 179:5148-56.
	†		, Processive Recombination by Wild-type Gin and an Enhancer-independent Mutant, 1994 J.
		Mol. Biol., 243(3	
<u> </u>	1		transfer with subsequent removal of the selection gene from the host genome, 1991 Proc.
1	1	Natl. Acad. Sci., 8	
			a- and intermolecular site-specific recombination in plant cells mediated by bacteriophage P1
	1	recombinase, 1990	
	1		atic and germinal inheritance of an FLP-mediated deletion in transgenic tobacco, 1999 J. of
	1	Experimental Bota	
	T		ene integration into the same chromosome location can produce alleles that express at a
Ì	l		or alleles that are differentially silenced, 2000 GENES & DEVELOPMENT, 14:2869-80.
			ansgene silencing of invertedly repeated transgenes is released upon deletion of one of the
\perp			ed, 2001 Plant Mol. Biol, 46:433-45.
			okaryotic β -Recombinase Catalyzes Site-specific Recombination in Mammalian Cells, 1999
1 1		J. Biol. Chem., 27	
			nsights into Host Factor Requirements for Prokaryotic β-Recombinase-mediated Reactions in
1 1			2001 J. Biol. Chem., 276:16257-64.
			pecific Chromosomal Integration in Mammalian Cells: Highly Efficient CRE Recombinase-
1			Exchange, 1999 J. Mol. Biol., 292:779-85.
			n, The Fis protein: it's not just for DNA inversion anymore, 1992 Mol. Microbiology,
		6:3257-65.	
		Friedman, Integrat	tion Host Factor: A Protein for All Reasons, 1988 Cell, 55:545-54.
			ctable marker-free transgenic plants without sexual crossing: transient expression of cre
			use of a conditional lethal dominant gene, 1999 Plant Mol. Biol., 40:223-35.
			age integrase directs efficient site-specific integration in human cells, 2000 PNAS, 97:5995-
		6000.	<u> </u>
		Hajdukiewicz et a	I., Multiple pathways for Cre/lox-mediated recombination in plastids, 2001 The Plant J.,
		27:161-170.	
		Hatfull and Grindl	ey, Resolvases and DNA-Invertases: a Family of Enzymes Active in Site-Specific
		Recombination, 19	988 Genetic Recombination, 11:357-96.
\perp			nation of selection markers from transgenic plants, 2001 Current Opinion in Biotechnology,
		12:139-43.	
			ffects of Heterochromatin and Euchromatic Gene Activity in Drosophila melanogaster,
		1995 Genetics, 14	0:1033-45.
		Iyer et al., Transge	ene silencing in moncots, 2000 Plant Mol. Biol., 43:323-46.
			oigenetic aspects of somaclonal variation in plants, 2000 Plant Mol. Biol., 43:179-88.
1	Î		olled induction of GUS marked clonal sectors in Arabidopsis, 2000 J. of Experimental
	<u></u>	Botany, 51:853-63	<u>. </u>

KECEIVED

DEC 0 4 2001 TECH CENTER 1600/2900 3

\0 1 B	z) 3
	Kolb and Siddell, Genomic targeting of a bicistronic DNA fragment by Cre-mediated site-specific
PHADE	1000momation, 1777, GENE, 203.207-10.
07	Kolot <i>et al.</i> , Site-specific recombination in mammalian cells expressing the Int Recombinase of bacteriophage HK022, 1999 Mol. Biol. Reports, 26:207-13.
	Kuhstoss and Rao, Analysis of the Integration Function of the Streptomycete Bacteriophage ΦC31, 1991 J. Mol. Biol., 222:897-908.
	Kutsukake K. et al., A gene for DNA invertase and an invertible DNA in Escherichia coli K-12, 1985 Gene, 34(2-3):343-50.
	Landy, Dynamic, Structural, and Regulatory Aspects of λ Site-Specific Recombination, 1989 Annu. Rev. Biochem., 58:913-49.
	Loessner <i>et al.</i> , Complete nucleotide sequence, molecular analysis and genome structure of bacteriophage A118 of <i>Listeria monocytogenes</i> : implications for phage evolution, 2000 Mol. Microbiology, 35:324:40.
	Loonstra <i>et al.</i> , Growth inhibition and DNA damage induced by Cre recombinase in mammalian cells, 2001 PNAS, 98:9209-14.
	Lorbach <i>et al.</i> Site-specific Recombination in Human Cells Catalyzed by Phage λ Integrase Mutants, 2000 J. Mol. Biol., 296:1175-81.
	Lyznik, L.A. <i>et al.</i> , FLP-mediated recombination of <i>FRT</i> sites in the maize genome, 1996 Nucleic Acids Res., 24(19):3784-9.
	Lyznik, L.A. et al., Activity of yeast FLP recombinase in maize and rice protoplasts, 1993 Nucleic Acids Res., 21:969-75.
	Maeser and Kahmann, The Gin recombinase of phage Mu can catalyse site-specific recombination in plant protoplasts, 1991 Mol. Gen. Genet., 230:170-76.
	Matsuura et al., The sre Gene (ORF469) Encodes a Site-Specific Recombinase Responsible for Integration of the R4 Phage Genome, 1996 J. of Bacteriology, 178:3374-76.
 	Matzke <i>et al.</i> , Transgene silencing by the host genome defense: implications for the evolution of epigenetic
	control mechanisms in plants and vertebrates, 2000 Plant Mol. Biol., 43:401-15.
	Medberry et al., Intra-chromosal rearrangements generated by Cre-lox site-specific recombination, 1995 Nucleic Acids Res., 23:485-90.
	Meyer, Transcriptional transgene silencing and chromatin components, 2000 Plant Mol. Biol., 43:221-34.
	Muskens <i>et al.</i> , Role of inverted DNA repeats in transcriptional and post-transcriptional gene silencing, 2000 Plant Mol. Biol., 43:243-60.
	O'Gorman <i>et al.</i> , Recombinase-Mediated Gene Activation and Site-Specific Integration in Mammalian Cells, 1991 Science, 251:1351-55.
	Onouchi et al., Visualization of site-specific recombination catalyzed by a recombinase from
	Zygosaccharomyces rouxii in Arabidopsis thaliana, 1995 Mol. Gen. Genet. 247:653-660. Ow, The right chemistry for marker gene removal?, 2001 NATURE BIOTECHNOLOGY, 19:115-6.
	Ow, Recombinase-directed chromosome engineering in plants, 1996 Current Opinion in Biotechnology, 7:181-
	86.
	Ow and Ausubel, Conditionally Replicating Plasmid Vectors That Can Integrate into the <i>Klebsiella pneumoniae</i> Chromosome via Bacteriophage P4 Site-Specific Recombination, 1983 J. of Bacteriology, 155:704-13.
	Ow and Medberry, Genome Manipulation Through Site-Specific Recombination, 1995 Crit. Rev. Plant Sci., 14:239-261.
	Peschke and Phillips, Genetic Implications of Somaclonal Variation in Plants, 1992 Advances in Genetics, 30:41-75.
	Qin <i>et al.</i> , Cre recombinase-mediated site specific recombination between plant chromosomes, 1994 Proc. Natl. Acad. Sci., 91:1706-10.
	Qin et al., Site-specific cleavage of chromosomes in vitro through Cre-lox recombination, 1995 Nucleic Acids Res., 23:1923-7.
	Sadowski, Site-Specific Recombinases: Changing Partners and Doing the Twist, 1986 J. of Bacteriology, 165:341-7.
	Sadowski, Site-specific recombination: hops, flips, and flops, 1993 FASEB J., 7:760-67.
1	Sato et al., The cisA Cistron of Bacillus subtilis Sporulation Gene spoIVC Encodes a Protein Homologous to a Site-Specific Recombinase, 1990 J. of Bacteriology, 172:1092-8.
sch	Sauer, Site-specific recombination: developments and applications, 1994 Current Opinion in Biotechnology, 5:521-7.

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DEI: 0.3 YOUR E	Schmidt et al., Illegitimate Cre-dependent chromosome rearrangements in transgenic mouse spermatids, 2000 PNAS, 97:13702-7.
J. Jakob	Schwikardi and Dorge, Site-specific recombination in mammalian cells catalyzed by λδ resolvase mutants: implications for the topolgoy of episomal DNA, 2000 FEBS Let., 471:147-150
	Seibler and Bode, Double-Reciprocal Crossover Mediated by FLP-Recombinase: A Concept and an Assay, 1997 Biochem., 36:1740-7.
	Seibler et al., DNA Cassette Exchange in ES Cells Mediated by FLP Recombinase: An Efficient Strategy for Repeated Modification of Tagged Loci by Marker-Free Constructs, 1998 Biochemistry, 37:6229-34.
	Srivastava et al., Single-copy transgenic wheat generated through the resolution of complex integration patterns, 1999 Proc. Natl. Acad. Sci. USA, 96:11117-11121.
	Srivastava and Ow, Single-copy primary transformants of maize obtained through the co-introduction of a recombinase-expressing construct, 2001 Plant Mol. Biol., 46:561-566.
	Stark et al., Catalysis by site-specific recombinases, 1992 TIG, 8:432-9.
	Stavenhagen and Zakian, Internal tracts of telomeric DNA act as silencers in <i>Saccharomyces cerevisiae</i> ,1994 Genes and Dev., 8:1411-22.
	Stragier <i>et al.</i> , Chromosomal Rearrangement Generating a Composite Gene for a Developmental Transcription Factor, 1989 Science, 243:507-512.
	Thomason et al., Gene insertion and replacement in Schizosaccharomyces pombe mediated by the Streptomyces bacteriophage Φ C31 site-specific recombination system, 2001 Mol. Genet. Genomics, 265:1031-8.
	Thorpe & Smith, <i>In vitro</i> site-specific integration of bacteriophage DNA catalyzed by a recombinase of the resolvase/invertase family, 1998 Proc. Nat'l. Acad. Sci. USA, 95:5505-10.
	Thyagarajan et al., Site-Specific Genomic Integration in Mammalian Cells Mediated by Phage ΦC31 Integrase, 2001 Mol. and Cell. Biol. 21:3926-34.
	Thyagarajan et al., Mammalian genomes contain active recombinase recognition sites, 2000 GENE, 244:47-54
	Tominaga A et al., Site-Specific Recombinase Genes in Three Shigella Subgroups and Nucleotide Sequences of a pinB Gene and an Invertible B Segment from Shigella boydii, 1991 J. Bacteriol., 173(13):4079-87.
V	Vergunst <i>et al.</i> , Cre/lox-mediated recombination in <i>Arabidopsis</i> : evidence for transmission of a translocation and a deletion event, 2000 Chromosoma, 109:287-97.
	Vergunst and Hooykaas, Cre/lox-mediated site-specific integration of Agrobacterium T-DNA in Arabidopsis thaliana by transient expression of cre, 1998 Plant Mol. Biol., 38:393-406.
	Vergunst et al., VirB/D4-Dependent Protein Translocation from Agrobacterium into Plant Cells, 2000 Science, 290:979-82.
	Vergunst et al., Site-specific integration of Agrobacterium T-DNA in Arabidopsis thaliana mediated by Cre recombinase, 1998 Nucleic Acids Res., 26:2729-34.
	Voziyanov <i>et al.</i> , A general model for site-specific recombination by the integrase family recombinases, 1999 Nucleic Acids Res., 27:930-41.
	Wallrath and Elgin, Position effect variegation in <i>Drosophila</i> is associated with an altered chromatin structure, 1995 Genes and Dev., 9:1263-77.
	Weisberg and Landy, Site-specific Recombination in Phage Lambda, 1983 LAMBDA II, Cold Spring Harbor Laboratory 211-50.
ah	Zuo et al., Chemical-regulated, site-specific DNA excision in transgenic plants, 2001 Nature Biotechnology, 19:157-61.
AMINER	DR. GEORGIA UELARD DATE CONSIDERED 4 29 13

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